

UNITED STATES DISTRICT COURT
FOR THE SOUTHERN DISTRICT OF NEW YORK

DAVID LEIBOWITZ, BENJAMIN
LEIBOWITZ, JASON LEIBOWITZ,
AARON LEIBOWITZ, and PINCHAS
GOLDSHTEIN

Plaintiffs,

v.

IFINEX INC., BFXNA INC., BFXWW
INC., TETHER HOLDINGS LIMITED,
TETHER OPERATIONS LIMITED,
TETHER LIMITED, TETHER
INTERNATIONAL LIMITED,
DIGFINEX INC., PHILIP G. POTTER,
GIANCARLO DEVASINI,
LUDOVICUS JAN VAN DER VELDE,
REGINALD FOWLER, CRYPTO
CAPITAL CORP., and GLOBAL TRADE
SOLUTIONS AG,

Defendants.

Case No. 1:19-cv-09236-KPF

Honorable Katherine Polk Failla

Affidavit of Andreas M. Antonopoulos

I, Andreas Antonopoulos, declare under penalty of perjury, as follows:

1. I am over the age of eighteen (18), I am not a party to this action, and I am a resident of the United States of America. I have been retained as an expert in this matter.

2. I base the facts and opinions in this declaration on my personal knowledge, education, experience, and documents provided to me by counsel. If called as a witness, I could and would testify to the truth of these facts and opinions under oath.

3. I believe that my education and experience fully qualify me to make the statements contained in this declaration.

4. I earned my bachelor's degree (1994) in computer science and my master's degree (1995) in data communications, networks and distributed systems, both from University College London, while also working in information technology ("IT").

5. Since 1990, I have worked in the IT sector, with an emphasis on networks, distributed systems, security, and training. I have secured three patents for network technology inventions and have published more than 200 articles and reports on security, data centers, cloud computing and cryptographic currencies.

6. I am considered one of the world's foremost experts in Bitcoin and open blockchain technology. I have worked in the Bitcoin and open blockchain industry since 2012.

7. In 2014 O'Reilly Media published my first book, MASTERING BITCOIN, a technical book for programmers. The book is widely viewed as the definitive guide on the subject and to date is the world's most cited book on Bitcoin. In 2017, MASTERING BITCOIN 2ND EDITION, was published.

8. Since 2014, I have published four more books on the topics of Bitcoin and open blockchains. My sixth book, a technical book for programmers with a working title of MASTERING

THE LIGHTNING NETWORK, is scheduled to be published by O'Reilly Media in the fourth quarter of 2020.

9. I have testified as an expert witness before regulators with respect to Bitcoin technology, before the Canadian Senate Banking and Commerce Committee, and before the Economics References Committee of the Australian Senate.

10. I am a frequent keynote speaker at technology and security conferences worldwide. I have been interviewed by Bloomberg, CNN, CNBC, CBS, NBC, ABC, BBC, the Financial Times and many more media organizations for my industry expertise.

11. I am one of five directors of the CryptoCurrency Certification Consortium (C4), a Canadian non-profit industry standards and certification organization. Among its other actions, C4 occasionally hosts events called Blockchain Training Conferences which, as the name implies, trains professionals including lawyers, certified public accountants, and auditors. I am involved in setting curriculum goals and speaker selection for these events. Every attendee can earn a Certified Bitcoin Professional (CBP) credential if they can demonstrate proficiency by passing an examination. The Blockchain Training Conference in 2019 offered the first training workshop for the new CryptoCurrency Security Standard Auditor (CCSSA) professional designation. I was part of the steering committee which developed the CCSS standard upon which the CCSSA examination is built.

12. I am a member of the Chicago Mercantile Exchange's CF Benchmarks Core Oversight Team, that reviews and oversees the application of the CF Benchmarks methodology in publishing the CF Benchmark Reference Rates, including the Bitcoin Reference Rate (BRR) and the Bitcoin Real Time Index (BRTI), which are regulated price indexes used in trading cryptocurrencies and cryptocurrency futures in regulated exchanges.

13. I am a teaching fellow for the University of Nicosia, where since 2014 I have been teaching the Massive Open Online Course (MOOC), part of the M.Sc. in Digital Currencies. The University of Nicosia M.Sc. in Digital Currencies, is the longest running and one of the first university graduate courses on the topic of blockchain technology.

14. I set forth additional facts about my background and qualifications, including a complete list of books that I have authored during the past several years, in my curriculum vitae, attached as Exhibit A.

15. In my experience, cryptocurrencies like bitcoin and USDT present novel and unique legal challenges, including because they are non-traditional asset classes, with unique technical and financial properties. The technology of cryptocurrencies and blockchains also changes very fast, at a speed that often outpaces the speed of development of relevant regulatory and legal frameworks. Additionally, while the technologies of cryptocurrencies and blockchains shares some superficial similarities with other financial technologies, they differ in fundamental ways that have very few prior analogues and are difficult to explain to non-experts.

16. Accordingly, in my experience, as was true of the internet during the 1990s, many legal professionals struggle with the technical, function, and evolving properties of cryptocurrency, and therefore struggle with how pre-existing law might sensibly apply to them.

17. Kyle Roche, of Roche Cyrulnik Freedman (“RCF”), has demonstrated proficiency in these areas, unlike most other lawyers in the industry. My work with Mr. Roche has been in two contexts: (1) as an expert witness for a matter being litigated in the Southern District of Florida concerning a dispute over the ownership of a large amount of bitcoin (*Kleiman et al. v. Craig Wright*, Case No. 9:18-cv-80176 (S.D. Fla.); and (2) consulting with Mr. Roche in connection with this case.

18. In the *Kleiman* matter, Mr. Roche has repeatedly demonstrated an understanding of the technical and functional properties of bitcoin, cryptocurrencies, blockchain, and their underlying cryptographic principles superior to many other attorneys.

19. The complaint by Roche Freedman LLP filed was one of the first examples I have seen where litigators have demonstrated an understanding of this complex and novel subject matter.

20. As a thought leader in the industry, Mr. Roche was an invited speaker to the 2019 Blockchain Training Conference.

21. While I have not had the opportunity to work as closely with the other lawyers at Mr. Roche's firm, I have had the opportunity to review the work product produced by Mr. Roche, Velvel Freedman, and Joseph Delich in both the *Kleiman* matter and the matter at bar. I have been impressed with this work product and would expect them to demonstrate similar proficiency as the case progresses to serve the members of the class to the highest standards of his profession.

22. In sum, for these reasons, I believe that Roche Cyrulnik Freedman LLP is uniquely qualified to represent members of the class in this litigation.

Dated: January 27th 2020

ANDREAS M. ANTONOPOULOS

CURRICULUM VITAE
Andreas M. Antonopoulos
andreas@antonopoulos.com

ABSTRACT

Andreas M. Antonopoulos is a highly sought after world-class expert in Bitcoin and open blockchain technology. Andreas has been working exclusively in the Bitcoin and Open Blockchain industry since 2012.

In 2014 O'Reilly Media published Andreas' first book, Mastering Bitcoin, a technical book for programmers. The book is widely viewed as the definitive guide on the subject and to date is the world's most cited book on Bitcoin.¹ Subsequently, Mr. Antonopoulos has authored 3 additional books on the topics of bitcoin and open blockchains, with 2 more being published December 2019 and 4th Quarter 2020 respectively. He has testified before regulators as an expert witness with respect to Bitcoin technology, once in 2014 before the Canadian Senate Banking and Commerce Committee and again in 2015 before the Economics References Committee of the Australian Senate.

In addition to his own projects within the industry, which demand the majority of his time, since 2014 he has served as a teaching fellow at the University of Nicosia, assisting with curriculum content and design, as well as co-teaching the Introduction to Digital Currencies course. Additionally, in 2014 he served as Chief Security Officer for blockchain.info, a well-known bitcoin wallet and block explorer.

During college, Mr. Antonopoulos earned both his bachelors and masters degrees in Computer Science from University College London. During college, he studied networks and distributed systems while simultaneously working in IT. In fact, since 1990 Andreas has worked exclusively in the Information Technology sector, with an emphasis on networks, distributed systems, security, and training. He secured three patents for network technology inventions and has been published in peer reviewed journals as well as mainstream media sources.

Andreas has authored hundreds of syndicated articles on security, cloud computing, and data centers; and is a frequent keynote speaker at technology and security conferences worldwide. He has been interviewed by Bloomberg, CNN, CNBC, CBS, NBC, ABC, BBC, the Financial Times and many more media organizations for his industry expertise. He has been featured in numerous documentary films and is a permanent host on the Let's Talk Bitcoin podcast with more than 400 episodes recorded to date.

UNIVERSITY TEACHING AND RESEARCH

2014-to date	University of Nicosia - Teaching Fellow "M.Sc. Digital Currencies"
1995-1997	University College London - Research Fellow "Distributed Systems Lab"
1994-1995	University College London - Teaching Assistant "Internet and E-Commerce"
1992-1994	University College London - Computer Lab Assistant

¹ According to a December 2nd, 2019 Google Scholar search

EDUCATION

- 1994-1995 M.Sc. Data Communications Networks & Distributed Systems (DCNDS).
University College London, London, UK.
M.Sc. Project in cross-platform distributed data exchange framework as part of the EU (HANSA ESPRIT) funded project.
- 1991-1994 B.Sc. (Hons.) Computer Science.
University College London, London, UK.
B.Sc. Project in distributed collaborative computing, X-Windows screen-sharing protocol.
- 1989 Lycee Leonin, High School Diploma, Athens Greece

EXPERT WITNESS TESTIMONY

Canadian Senate Banking and Commerce Committee, presenting on Bitcoin and digital currencies, October 8, 2014.

Economics References Committee of the Australian Senate, presenting on Bitcoin and digital currencies, March 4, 2015

PUBLISHED BOOKS

- 2014 *Mastering Bitcoin*, O'Reilly Media²
1088 scholarly citations³
- 2016 *The Internet of Money Volume 1*, Merkle Bloom
58 scholarly citations
- 2016 *Mastering Bitcoin 2nd Edition*, O'Reilly Media
227 scholarly citations
- 2017 *The Internet of Money Volume 2*, Merkle Bloom
- 2018 *Mastering Ethereum*, O'Reilly Media
65 scholarly citations
- 2019⁴ *The Internet of Money Volume 3*, Merkle Bloom
- 2020⁵ *Mastering the Lightning Network*, O'Reilly Media

PUBLISHED ARTICLES

1998 - date More than 200 published articles and reports on Security, Data Centers, Cloud Computing and Cryptographic Currencies. (comprehensive listing available upon request)

INTERVIEWS

2012 - date More than 100 interviews on the topics of bitcoin and open blockchains

² World's most cited book on bitcoin, according to Google Scholar

³ Citation counts by Google Scholar - updated November 2019

⁴ Published December 2019

⁵ Due for publication Q4'2020

including Bloomberg, CNN, CNBC, CBS, NBC, ABC, BBC, and Financial Times.
(comprehensive listing available upon request)

PATENTS

System and Method for Securing Virtualized Networks USPTO 61/720,343

System and Method of Subnetting a Virtual Network Identifier, USPTO 14/210,069

System and Method for Dynamic Management of Network Device Data USPTO 9479P001

JOURNAL PUBLICATIONS

Peer-Reviewed Framework for Distributed Application Generation, SPEEDUP
Volume 11, Number 1, pp.15-17, Scientific Journal, (Jun. 1, 1997)

PROFESSIONAL HISTORY

2012 – to date **Founder, CEO** - aantonop Companies

Own and operate several companies focused on producing educational content about bitcoin and other open blockchains to people around the world. Manage a team of 11 people, producing videos, articles, interviews and books, public speaking, seminars, educational courses, and event management.

2014 - to date **Teaching Fellow** - University of Nicosia M.Sc Digital Currencies

Co-teach the open “MOOC” course for UNIC’s MSc programme in digital currencies., the world’s first university course in digital currencies. Curriculum development, teaching.

2014 Jan - Sep **Chief Security Officer** - Blockchain.info (bitcoin wallet and block explorer)

Served as the Chief Security Officer (CSO), coordinating strategy for security, secure software engineering practices, and security operations.

2003 – 2011 **Founding Partner, CIO, Lead Security Research Analyst** - Nemertes Research

Developed and managed research projects, conducted strategic seminars and advised key clients as the lead analyst in Information Security, Data Center and Cloud Computing. CIO for the firm, managed a diverse cloud infrastructure supporting distributed team. Responsible for HR and legal management. Founding partner and managing director.

2002-2003 **Director Security Practice** - ThruPoint Inc, NY

Directed a team of 70-80 network security, information security and penetration testing engineers, ensuring consistent delivery of consulting and professional services across a global delivery team. Supported sales efforts as team lead and promoted standardization of deliverables. Worked on accurately predicting and accounting for work effort, profit margin and project management in sales proposals.

2001 - 2002 **Security Practice Lead** - Greenwich Technology Partners, NY

Led the North East security practice, covering NY, NJ and CT, supporting sales operations (SME), delivering security advice and services and leading projects, including architecting global secure financial transaction network for SWIFT.

2000 - 2001 **Founder** - Managed Business Network, London, UK

Consulting and integration services. This company was a successor to Phaia Limited.

1997-2000 **Managing Director** / Co-Founder - Phaia Limited, London, UK

IT services and system administration.

1997-2000 **Instructor - Security, Networking** - Learning Tree International, London, UK

Taught IT professionals 4-day intensive seminars on data communications, IT security, operating system security and network security. Highest rated instructor in Information Security for 2 years running.

1995-1997 **Research Fellow** - University College of London, Computer Science Department, London, UK

ESPRIT-funded interactive media project. External Lecturer. Lead Research Fellow, “Distributed Application Generation”, EPSRC-funded project.

1995-1997 **Founder** - Athena Systems Design Limited, London, UK

IT consulting, systems administration, network installation

- 1993-1995 **IT Manager** - Odey Asset Management, London, UK
Responsible for all IT at this legendary and pioneering british hedge fund. Systems administration, telecommunication, Internet security, email services, fax/telex servers, desktop support, trading systems (Reuters/Bloomberg), training.
- 1991-1993 **Freelance IT Consulting** - London, UK
IT support, systems administration, training
- 1990-1991 **Network Support Engineer, Trainer** - IBM Greece
Network installation, technical support, training.

Earlier work history available upon request